Web Analytics Recipe Cards

A Guide to Using Web Analytics Reports to Optimize Your Web Site

As a Web site manager, you want to optimize your Web sites and marketing efforts based on information obtained from your Web analytics solution. While NetTracker Web analytics solutions provide an unlimited amount of reporting capabilities, you are likely curious if you are performing the kinds of online channel analysis that you should be, and that your peers are performing. This guide offers ten recipe cards for crafting the kinds of Web analytics reports that will allow you to extract crucial information for accomplishing the most typical business goals. Whether you are looking to attract more visitors, convert more visitors, or increase visitor retention, enclosed you will find invaluable ideas for using NetTracker Web analytics to grow your business.

Based on NetTracker Web analytics solutions

Optimize online marketing campaigns
Page 1/2

Marketing campaigns, conversions

- Google AdWords
- Banner Ad on affiliate Web site
- Overture pay for performance search
- Special offer e-mail campaign
- Print ad in business magazines
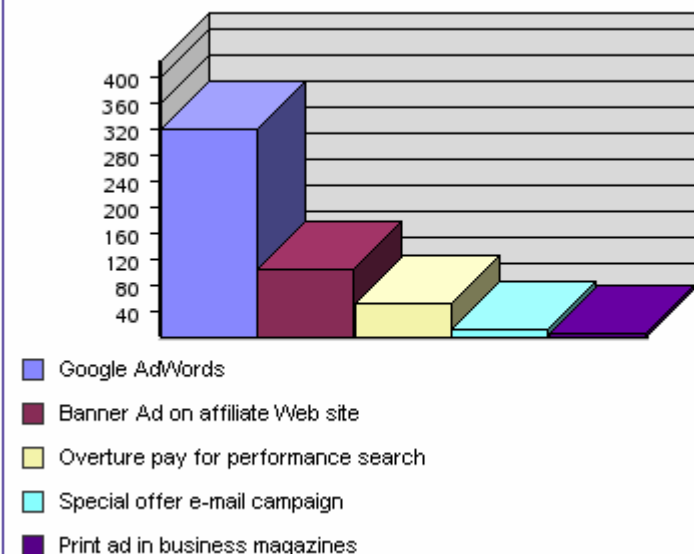
Business goal

To maximize your desired outcomes by allocating a finite marketing budget optimally among campaign options.

Examples:

- Maximize number of qualified leads captured online
- Maximize online or offline revenue
- Maximize brand awareness

Background information and common terminology

An online marketing campaign can be defined as any marketing communication containing a Web site URL that visitors may visit in order to respond to the campaign. Campaigns can be e-mails, banner ads, print ads, search engine ads, and so forth. An **impression** is defined as an instance where a potential visitor views your ad. A **clickthrough** means that the visitor selected a link from the ad to your Web site. A **conversion** means that the visitor completed a desired action, such as becoming a lead or a customer.

Furthermore, a campaign, for example for a Spring promotion, could be launched in parallel through multiple **campaign channels**, e.g. Yahoo and AOL. The channels can be of different **channel types**, such as banner ads, or paid textual listings. Within the campaign, different **campaign segments** may be addressed to different target audiences and/or may include different creative.

Most common challenges

- To measure not just clickthroughs from marketing campaigns, but conversions, especially if conversions occur during successive visits to the Web site (not in the initial visit in response to a campaign).
- To attribute offline conversions to online campaigns by joining customer data located in offline databases to the same customer's online footprint located in the NetTracker database.
- To methodically test campaign options before selecting the most promising candidate.

Required information sources

- A unique entry page URL for each campaign segment. Instead of hyper-linking from an e-mail newsletter to your home page, (http://www.mysite.com), make the link unique to the segment, (http://www.mysite.com/?campaign=123).
- Data that identifies which visits lead to conversions, whether they occur online or offline.
- Ideally, data that identifies the value of a conversion, e.g. obtaining a customer.
- Ideally, data that identifies the cost of a campaign.

Visitor Attraction

Campaigns

PPC

Organic Search

Local Search

Visitor Conversion

Content Relevancy

Navigation

Placement

Individual Clickstreams

Repeat Business

Recency

Cross sell

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Optimize online marketing campaigns
Page 2/2
Flip to front of card

Campaigns

PPC

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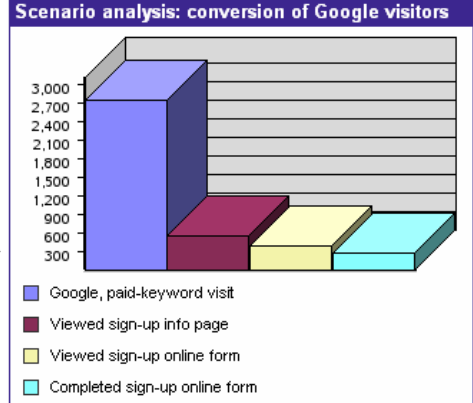
Cross sell

Visitor Attraction

Visitor Conversion

Repeat Business

Solutions for measuring your success with marketing campaigns

NetTracker's suite of Campaign Summaries measure clickthroughs attributable to each of your marketing campaigns, campaign channels, campaign segments, and channel types. You can apply additional filters to the Campaign Summaries, e.g. for visits that included a view of the "Thank you for registering" page. A Campaign Summary filtered in such a way now measures the conversion of visitors to registrants attributable to each campaign. This can Look similar to the graph displayed on the front side of this card.

Scenario Reports, such as the graph on the right, offer a solution for measuring conversions of campaign visitors even if the conversion occurred during successive visits to the Web site, later in time than the initial campaign response. For example, the Scenario Report on the right shows the visitors who clicked on a paid listing on Google, in the blue column. Each additional column in the graph tracks the number of visitors who eventually (even over multiple Web site visits) continued to complete specific steps of a sign-up process, up to the completion of a form

Scenario analysis: conversion of Google visitors

3,000 / 2,700 / 2,400 / 2,100 / 1,800 / 1,500 / 1,200 / 900 / 600 / 300

- Google, paid-keyword visit
- Viewed sign-up info page
- Viewed sign-up online form
- Completed sign-up online form

Investigating clues for optimizing your marketing campaigns

Rather than relying on intuition as the basis for decision making, you can test alternative campaign designs with test audiences, before launching your mass campaign. When you conduct an A/B test, create variations of campaigns and simply ad one additional URL parameter to the destination URLs of your hyperlinks so that NetTracker can identify which campaign variation each visit should be attributed to. For example:

http://mysite.com/?campaign=123&creative=A

Configure NetTracker to track "creative" as a URL parameter. A NetTracker crosstab summary will show the results for your A/B testing, similar to the following:

	▲ Campaign Channel ▼	URL Parameter Creative	▲ Views ▼	▲ Visits ▼
1.	Banner Ad	A	7,437 (13.4%)	2,554 (13.0%)
		B	3,504 (6.3%)	1,151 (5.9%)
2.	Direct mail campaign	A	1,314 (2.4%)	472 (2.4%)
		B	653 (1.2%)	225 (1.1%)

Furthermore, investigate NetTracker's Content Group, Local Keyword, and Exit Page Summaries, filtering them to unsuccessful campaign visits, in order to understand what these visitors may have been looking for that they did not find or did not like on your site.
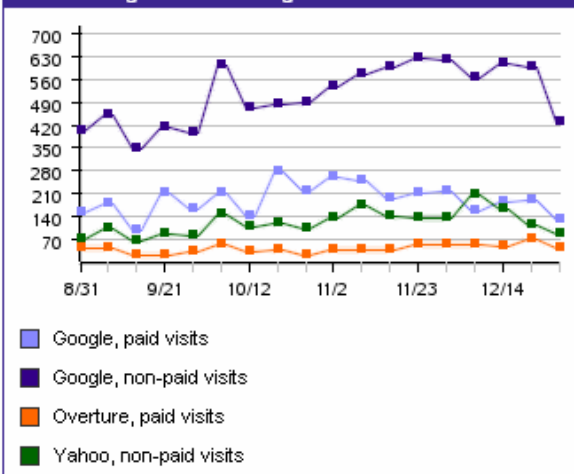
Action items

- Increase spending on campaigns with high conversions or conversion rates and continue to measure outcomes.
- Review Web site pages or processes causing high drop-offs. Experiment.

Further reading

- Refer to the section "Analyzing Marketing Efforts" in the NetTracker User's Guide.

Optimize pay-per-click (PPC) advertising
Page 1/2

Search engine marketing trends

- Google, paid visits
- Google, non-paid visits
- Overture, paid visits
- Yahoo, non-paid visits

Business goal

To maximize your desired outcomes by allocating a restricted PPC budget optimally among PPC vendors, PPC types (search based vs. content network), campaign segments, ad variations, and paid keywords.

Sample PPC advertising vendors:

- Google AdWords based on search or based on Google's AdSense content network
- Overture Pay-for-Performance ads based on search or content network

Background information and common terminology

Pay-per-click (**PPC**), (also called cost-per-click or **CPC**), has become the standard model for advertising with search engines. PPC vendors allow you to bid a maximum price you are willing to pay for a click on your "ad" (or listing) which is to appear when a visitor searches for the **paid keywords** on which you bid. If you allow **broad matching** rather than **exact matching**, your ads may appear even if visitors search for derivatives of your paid keywords. In other words, your paid keyword can be different than the actual search keyword that a visitor employed when they were served your paid listing. Your ads can appear on any search engine that contracts with the PPC vendor, or they may appear independent of search, on the PPC vendors' **content networks**. The latter are affiliated Web sites that provide ad space which the PPC vendors fill automatically based on their indexing of each page's content. The rank in which your ad appears, and the actual CPC, also depend on the maximum bids that competitors place for the same paid keywords. Finally, within the PPC vendors' advertising consoles, you can group your paid keywords into **ad groups** (Google) or **categories** (Overture). You can also supply one or multiple **ad variations** that will be served. The PPC vendors will automatically serve your ad variations that maximize your clickthroughs. However, they are unable to automatically optimize for visitor conversions, which is of course your priority.

Most common challenges

- While the actual search keyword that a visitor entered into a search engine can be automatically identified from the visit's referring URL, there is no information in the referring URL on the PPC vendor, paid keyword, ad group or ad variation which triggered your ad.
- The exact cost of a visit is nearly impossible to determine because PPC vendors only report the average cost-per-click per day (where the day is typically measured by the US Pacific time zone).

Required information sources

- Destination URLs which contain additional URL parameters revealing the PPC vendor, paid-keyword, ad-group and/or ad variation that triggered your ad, e.g. http://mysite.com/?ppcvendor=Overture&paidkeyword=Blue+Shoes&advariation=3.
- Ideally, data obtained from each PPC vendor (via their report exports) approximating the average CPC for each unique destination URL for each day.

Campaigns

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Individual Clickstreams

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Optimize pay-per-click (PPC) advertising
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(Side tabs, top to bottom:) Campaigns · PPC · Organic Search · Local Search · Content Relevancy · Navigation · Placement · Individual Clickstreams · Recency · Cross sell

(Vertical labels:) Visitor Attraction · Visitor Conversion · Repeat Business

Solutions for measuring your success with PPC advertising

NetTracker's Keyword Summary shows your visits by the actual search keywords or phrases that visitors entered into search engines. If, however, you have stuffed your destination URLs for your PPC ad as described, you can employ NetTracker's Campaign summaries and URL Parameter summaries to measure traffic attributable to each of your PPC vendors, ad groups, or paid-keywords. With NetTracker's report filtering capabilities, you can filter the aforementioned reports by significant business events, such as registrations or purchases, to measure your paid keywords most conducive to each conversion goal. Furthermore, if you enter your ad-variation texts into a Microsoft Access database or similar, you can employ the NetTracker data conduits to automatically replace URL parameters such as "advariation=3" with your actual PPC ad texts, to view with their conversion rates.

▲ PPC Keyword Ad Variation ▼	Paid Keywords	▲ Views ▼	▲ Visits ▼
1. Color copy machines Prepare beautiful color copies; Impress your colleagues www.yourSite.com	color copier	1,508 (2.7%)	1,334 (6.8%)
	color photocopier	646 (1.2%)	586 (3.0%)
	copy machines	243 (0.4%)	220 (1.1%)

Investigating clues for optimizing your PPC advertising

If you have enabled "broad matching" with your PPC vendors, you should cross-tabulate your paid-keywords with the actual search keywords that visitors employ, triggering your ads. This will give you further critical insight, that is unavailable from PPC vendors' reports, namely whether part of your costs go to mismatched search queries, for example, "history of color copiers" in the report below for a copy machine vendor's paid keyword "color copier". With this insight the vendor can exclude certain keywords, such as "history", from broad matching to ensure PPC dollars go only towards prospective clients.

▲ Paid Keywords ▼	Keyword	▲ Views ▼	▲ Visits ▼
1. color copier	color copier	2,853 (5.2%)	843 (4.3%)
	color copier reviews	380 (0.7%)	145 (0.7%)
	history of color copiers	135 (0.2%)	60 (0.3%)

Furthermore, with the help of ad-hoc analysis you can investigate what each segment of visitors coming from different paid keywords is looking for on your Web site. For example, create an ad-hoc Path-From Summary from your landing page for a specific paid keyword, to see how the visitors who arrive there then navigate your Web site. Next, click the NetTracker push-pin icon to make the filter criteria that you entered persistent, and select the Content Group and Exit Page Summaries for further information on the behavior of this visitor segment.

Action items
- Experiment with reducing bids and rank while measuring how low you can go without affecting conversions.
- Increase spending on paid keywords depending on resulting conversions.

Further reading
- Refer to the section "Using Data Conduits" in the NetTracker User's Guide.

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Web analytics recipe cards

Visitor conversions by organic search keyword
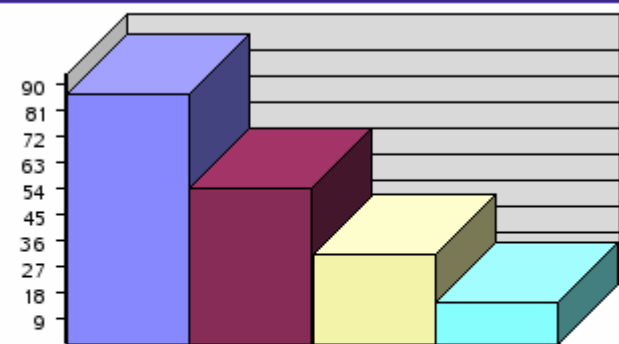
Legend:
- color copier
- color photocopier
- your company
- photo copies

Y-axis values: 90, 81, 72, 63, 54, 45, 36, 27, 18, 9

Business goal

When you optimize your Web site for organic search, the best practice is to first select a target set of keywords for which you will design and optimize your Web site pages. It will also be necessary to neglect some keywords in this process, accepting that you will not rank as high on those. In addition, you will have to decide how much effort to invest into the optimization of each page in order to increase its organic rank for the selected set of keywords.

The goal of analyzing organic search is to maximize your outcomes by selecting the optimal set of keywords for which to optimize your site, and by allocating your efforts optimally.

Background information and common terminology

Organic search refers to the free search results that Internet search engines such as Yahoo, Google, etc. return when visitors query them with specific **keywords**. A visit is considered to have been acquired from organic search if the visitor was referred from any Internet search engine, and if the visitor did not click on any paid listing that you may be running on the same search engine. **Organic rank** refers to your Web site's first appearance among search results for a specific keyword on a specific search engine. The **referring URL** to your Web site is the URL of the **search results page** on which your Web site's listing was clicked. For most search engines, this URL looks somewhat similar to the following example from Google. The URL contains a query string that reveals useful information, including the keyword that the visitor entered into Google.

http://www.google.com/search?**q=my+search+keyword**&hl=en&lr=&ie=UTF-8&start=10&sa=N

Search engine optimization refers to a range of optimization techniques, most importantly the effort of designing or adjusting content of Web pages such that their rank for entered keywords improves. Furthermore, search engines employ **crawlers** (**robots/spiders**) that periodically visit selected pages of Web sites in order to capture their content, to include within the **indexes** of the search engine.

Most common challenges

- A Web page may rank high for a specific keyword while ranking lower even for slight variations of the same keyword.
- The organic rank of a Web site changes as Internet search engines adjust their algorithms and indexes, and as competitors adjust their Web sites.
- Visits from organic search can enter a Web site on arbitrary Web pages.

Required information sources

- Referring URLs need to be enabled in the Web server log files. Alternatively, if using client-side page-tagging data collection, visitors must have JavaScript enabled for referring URLs to be available.
- Unique entry pages that you set aside for paid listings need to be known so that visits from paid search can be distinguished from organic search visits.

Sidebar tabs:
- Visitor Attraction: Campaigns, PPC, Organic Search
- Local Search
- Visitor Conversion: Content Relevancy, Navigation, Placement, Individual Clickstreams
- Repeat Business: Recency, Cross sell

Optimize your Web site for organic search
Page 2/2   **Flip to front of card**

Campaigns

PPC

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Solutions for measuring your success with organic search keywords

Although the query strings on search results pages differ between Internet search engines, NetTracker's Keyword Summary automatically extracts visitors' keywords from the referring URLs, regardless from which major search engine the visits originated. When the Keyword Summary is filtered to exclude visits entering your Web site on the unique landing pages that you set aside for your paid keyword listings, the remaining summary will only show visits from organic search keywords. At any time, you can apply further filters to the report, such as to restrict the report to visits which included a view of a "Thank you for registering" page. A Keyword Summary filtered in this way will then show conversions of visitors from organic search to site registrants and could look similar to the chart displayed on the front side of this card.

In order to measure how well your site is indexed by search engines, NetTracker's Robot/Spider Summary tracks visits by their crawlers. Filtering this summary to a specific Web site page, you can see whether and which search engines have indexed that page.

Filters Applied: Page: / Products / Features / Main

	▲ Robot/Spider ▼	▲ Last Visit ▼	▲ Views ▼	▲ Visits ▼
1.	Excite Search Engine	Dec. 31, 2003 at 12:29 a.m.	239 (21.3%)	143 (28.3%)
2.	AltaVista Search Engine	Dec. 30, 2003 at 9:26 p.m.	129 (11.5%)	111 (22.0%)

Investigating clues for optimizing your Web site for organic search

There are many ways in which you can investigate visits from organic search. For example:

- By filtering the reports in the NetTracker Content Analysis folder with specific organic keywords, you can find out what visitors employing these keywords were looking for on the Web site.
- By cross-tabulating the Referrer Summary with the Keyword Summary, you can see the keywords that are most often employed on each search engine. Doing the same with the Domain Summary will show popularity of keywords by country.
- By cross-tabulating the Entry Page Summary with the Keyword Summary, you can see the most frequent entry pages on your Web site for each keyword.
- By running a Path Summary from the most frequent entry page for a specific keyword, you can see how visitors navigate your Web site.

Filters Applied: Entry Pages that do not start with /ads

	▲ Keyword ▼	Entry Page	▲ Views ▼	▲ Visits ▼
1.	color photocopier	/ Products / Overview	276 (0.6%)	77 (0.5%)
		/ Home Page	83 (0.2%)	23 (0.1%)
		/ Demo / Demo options	8 (0.0%)	5 (0.0%)

Action items

- Optimize your site for keywords referring the most visitors with the highest tendency to convert to lucrative customers.
- Spend time increasing ranking only as long as higher ranks lead to significantly more visits / conversions.

Further reading
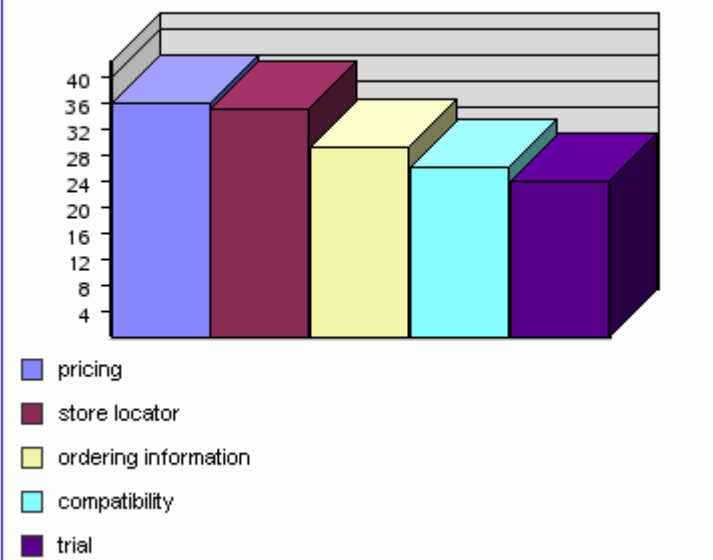
- Refer to the section Analyzing Marketing Efforts: Analyzing Keywords, in the NetTracker User's Guide.
- Refer to the recipe card for paid keyword (PPC) optimization.

Optimize site content by analyzing local search
Page 1/2

Most Frequent Local Keywords

- pricing
- store locator
- ordering information
- compatibility
- trial

Business goal

To increase conversions and customer satisfaction by first better understanding what visitors are looking for on the Web site that may be unavailable or difficult to find, and then acting on that insight to correct the problems.

Example:

- When visitors cannot find what they are looking for on your Web site using your primary navigation mechanisms they may resort to the local search capabilities that you offer for help.

Background information and common terminology

Most Web sites offer a **local search** option where visitors can enter keywords in order to locate content pages that relate to what they are looking for on the Web site. In the past, most frequently there was a hyperlink from the home page to go to a search form. Modern Web sites tend to offer a search box that can be accessed directly from any page. After launching a search, the results are displayed on a **search results page** from which the visitor can click to relevant items or issue a new search. Similar insight may also be gained from analyzing next-clicks for visitors that are using a site's **site map** to find what they are looking for.

Most common challenges

- It is difficult to interpret visitors' intent from analyzing their clickstreams alone. Analyzing local search is unique in that visitors are expressing their intent explicitly using their own words.

- Some local search functions do not provide the necessary data to perform analysis as they are either outsourced or do not leave a footprint of the search results inside the log files (neither through query strings nor page tags).

- Custom and ad hoc reporting capabilities are required to investigate the resulting actions of visitors following searches. Out-of-box reports provide very little information of value.

Required information sources

A search results page with a URL query string that includes URL parameters revealing:

1. The search phrase that the visitor entered and which search results were displayed

2. The number of results returned

3. Ideally, if there are more search results than fit on a single page, the page number within the search results that the visitor is viewing

Example:

/search-results.cgi?keyword=copy+paper& results-found=23&page=1

Visitor Attraction

- Campaigns
- PPC
- Organic Search

Visitor Conversion

- Local Search
- Content Relevancy
- Navigation
- Placement
- Individual Clickstreams

Repeat Business

- Recency
- Cross sell

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Solutions for measuring visitors' usage of local search

NetTracker's Local Keyword Summary is designed to analyze local search keywords employed by visitors, by extracting URL parameters that you set. Through ad hoc reporting, you can filter the summary in many ways. For example, by filtering on a URL parameter that indicates the number of search results found, the summary can be used to identify keywords with zero or few results returned. This often includes typically misspelled keywords for which you can start offering a workaround to help visitors find their way. You can also apply a NetTracker filter to restrict the report to those visits where the exit page, i.e. the last page of the visit, is the search results page. This will provide a report of the visitors that abandon your site, unable to fulfill their search.

Filters Applied: Exit Page: /search-results.cgi
Parameter Value for results-found: 0

	▲ Keywords ▼	▲ Last Visit ▼	▲ Views ▼	▲ Visits ▼
1.	pricing	Dec. 30, 2003 at 9:30 a.m.	83 (0.2%)	36 (0.2%)
2.	store locator	Dec. 31, 2003 at 2:14 p.m.	54 (0.1%)	35 (0.2%)
3.	ordering information	Dec. 29, 2003 at 9:04 a.m.	61 (0.1%)	29 (0.1%)

Optimizing content with insight revealed from investigating local search

There are countless ways in which you will wish to investigate your local search function using custom and ad hoc analysis. For example:

- In order to find out from which of your pages visitors most frequently resort to local search, run a custom Path-To Summary to the search results page, with the "Max length path" set to two.

- In order to find the keywords that visitors are most frequently searching on from each page on your site, define the referrer column of your log files as a Field Parameter in NetTracker, and then cross-tabulate that custom parameter with the Local Keyword Summary.

- If you wish to find out which local keyword searches return too many unhelpful results, you can filter for high values in the URL parameter which shows the page number within the search results on which visitors finally found what they were looking for.

- Finally, after making changes and enhancements to your Web site pages, you can run ad-hoc trend reports for searches on specific local keywords to monitor whether their usage decreased.

Trend of local searches for specific keywords

- Local searches for pricing information
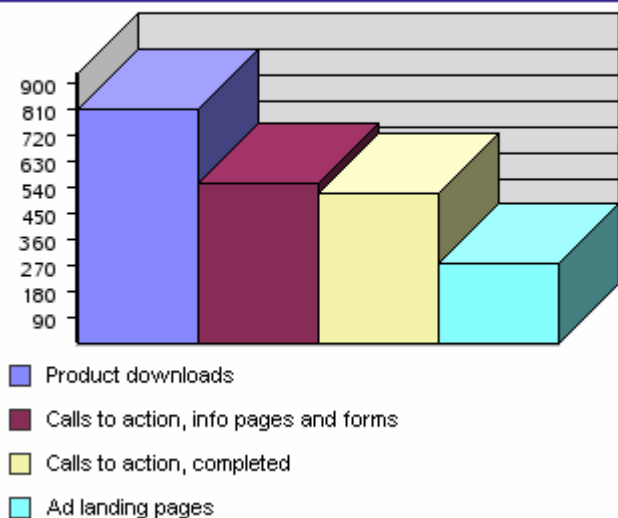- Local searches for store locations
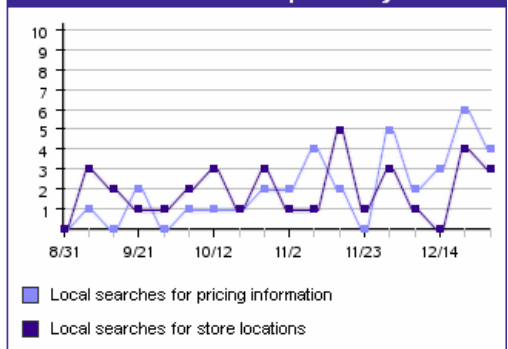
Action items
- Add content or functionality that you may be missing.
- Provide shortcuts to frequently searched items and provide workarounds for misspelled keywords.

Further reading
- Refer to the sections "Analyzing Local Keywords" and "Tracking Parameters in Arbitrary Fields" in the NetTracker User's Guide.

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Web analytics recipe cards

Visitors downloading product information also view the following content, most frequently

- 900
- 810
- 720
- 630
- 540
- 450
- 360
- 270
- 180
- 90

- Product downloads
- Calls to action, info pages and forms
- Calls to action, completed
- Ad landing pages

Business goals

No matter what the business goal of your Web site, you need to fine tune your site content to maximize desirable outcomes, such as:

- Achieving gains, by producing relevant content that converts more visitors to customers, or that entices visitors to frequently return.

- Achieving savings, by eliminating the cost of content that is irrelevant or underutilized, or by reducing call volume to the hotline by visitors who cannot find content they are looking for.

- Achieving efficiencies, by getting more users to adopt using online content.

Background information and common terminology

Web site content can consist of **static** HTML pages (.html), or can be **dynamic** (e.g. .jsp, .aspx, .cgi or similar). Dynamic content URLs typically have a **stem** and a **query string**. The latter is a set of **URL parameters** which are **key-value pairs** such as "sku=1234". The parameters are passed to the dynamic page referenced in the stem portion of the URL. Depending on the values of the parameters, the dynamic page will retrieve and display varied content, whose descriptions are stored in a database. The dynamic page will retrieve the desired content description (e.g. product name) based on the value of a URL parameter key, such as "sku".

The more content a Web site has, the more it will become necessary to structure content into categories. Categories may have sub-categories. Such hierarchies can be many levels deep. A system that describes the various categories, levels, and the dynamic or static content in each category is called a **content management system** (CMS). CMS can be homegrown applications or based on one of the many commercially available products.

Most common challenges

- Investigative analysis capabilities are required to assess how particular content contributes to visitors completing desired behavior patterns.

- Analyzing dynamic Web pages requires
  a) Extracting URL parameters from query strings
  b) Translating URL parameter values, e.g. "sku=123", into meaningful information, e.g. "product = shoes".

Required information sources

- Query strings and/or (session) cookies need to be enabled in the Web server log files.

- Descriptive data about the content in a CMS or similar, that allows lookup and translation of URL parameter values into more meaningful information.

- Accurately sessionized behavioral data for cross-referencing against content preferences.

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Solutions for measuring the relevancy of site content

The most basic measurements of content utilization are the numbers of page views, visits, and unique visitors per content item. These measures can be obtained from the many NetTracker Content summaries, on a page, directory, content group, or Web site level. NetTracker can automatically translate URL file names into HTML page titles to make reports easier to read. Furthermore, NetTracker's URL parameter extraction and cleansing capabilities allow users to create similar reports on the utilization of dynamic content. With the help of NetTracker's Data Conduits, parameter value codes, such as "content_type=103" can be automatically looked up in an external database, such as that of a CMS, and translated into more meaningful information for enhanced reporting. See the example below.

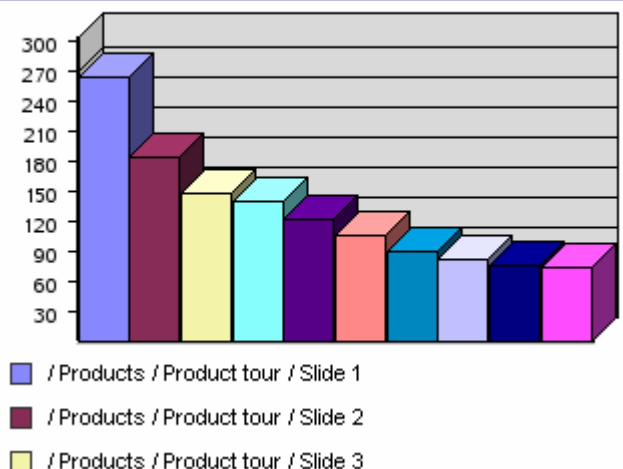|	▲ Content types URL parameter ▼	Content item URL parameter	▲ Views ▼	▲ Visits ▼
1.	Content type: 103, Product Brochures Content class: Products Content format: ZIP	1000737 Dynamic info about competitive intelligence Language=English	70 (0.1%)	59 (0.3%)
		1000599 Dynamic info about internet connection Language=German	40 (0.1%)	35 (0.2%)

In addition, you can filter any of the NetTracker Content summaries by any NetTracker Visitor Profile, such as a Visitor Profile for newly captured leads, in order to view the content that is popular with that specific segment of visitors. See the chart on the front side of this card.

Investigating clues for optimizing your Web site content

There are countless ways in which you will wish to investigate content utilization. For example:

- Companies using NetTracker for analyzing their intranets want to know which of their business units and employees make use of the intranet content, which others need to be encouraged to do so. If this applies to your site, you can run NetTracker's Visitor or Department Summaries and filter them to specific content items for which you wish to track utilization. Trend reports can help you monitor adoption over time.

- If your Web site has click-tours consisting of multiple, consecutive steps, e.g. product tours, you can create funnel reports, such as the example on the right, to see how many steps of the tour visitors tend to view. To create this report, simply filter NetTracker's Page Summary to your click tour's pages.

Product tour, drop-off funnel

300
270
240
210
180
150
120
90
60
30

- / Products / Product tour / Slide 1
- / Products / Product tour / Slide 2
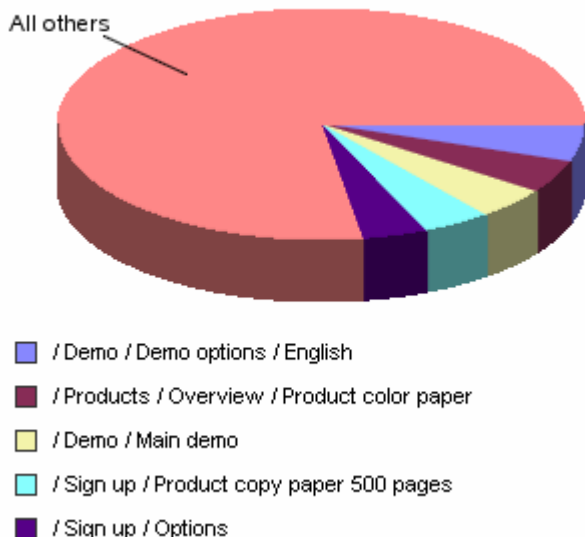- / Products / Product tour / Slide 3

Action items

- Fine tune content that is popular with visitors who complete desired actions, e.g. convert to leads or customers.
- Review pages with high drop-offs.
- Drop underutilized content.

Further reading

- Refer to the sections "Analyzing Content" and "Analyzing Dynamic Content" in the NetTracker User's Guide.

Next click of visitors after the home page

All others

- ☐ / Demo / Demo options / English
- ☐ / Products / Overview / Product color paper
- ☐ / Demo / Main demo
- ☐ / Sign up / Product copy paper 500 pages
- ☐ / Sign up / Options

Business goals

- To increase your visitors' satisfaction by helping them find what they are looking for in as few clicks as possible.
- To increase your Web site's success by minimizing unnecessary drop-offs, and getting more visitors to complete desired actions such as filling out online forms or purchasing your products, ultimately generating more leads, customers, and revenue for your organization.

Background information and common terminology

Most modern Web sites feature top or side **menus**, which help structure the site and provide quick access to specific content areas. **Hyperlinks** located on the Web pages themselves link users to other pages containing further information. Any given page can typically be reached via hyperlinks from multiple other pages. For this reason, the resulting navigational structure of the Web site forms a network of linked pages rather than resembling a top-down, tree structure. A visitors' **path** or **clickstream** may begin on any **entry page** on the Web site, and follow unpredictable, even cyclical patterns. Along the way, visitors may use the Web browser's **Back button**, to back track a few steps and continue in a different direction. The last page that is viewed in the visit to a Web site is called the **exit page**. The number of pages visited in a path is referred to as the **length** or **depth** of the path.

Most common challenges

- Most Web site traffic analysis solutions only store paths up to a limited length (discarding additional page views in longer paths), and therefore don't allow you to retrieve reports that accurately contain all of the visits that include all the pages you specify.
- Paths over dynamic Web site pages require including the relevant portions of the query strings in order to be meaningful.

Required information sources

- For paths across dynamic Web pages, query strings need to be enabled in the Web server log files. In addition, the query strings need to be cleansed of irrelevant portions, e.g. session identifiers, that would obstruct analysis.
- If visitors' usage of the Web browser's back button is to be tracked, page tags may need to be used for data collection (if the Web site has static HTML pages that would be cached in Web browsers, and if caching has not been turned off in the Web server for those specific pages).
- A session cookie or parameter to ensure accurate sessionization.

Visitor Attraction — Campaigns · PPC · Organic Search

Visitor Conversion — Local Search · Content Relevancy · **Navigation** · Placement · Individual Clickstreams

Repeat Business — Recency · Cross sell

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Left sidebar tabs: Campaigns | PPC | Organic Search | Local Search | Content Relevancy | **Navigation** | Placement | Individual Clickstreams | Recency | Cross sell

Vertical labels: Visitor Attraction — Visitor Conversion — Repeat Business

Solutions for measuring visitors' navigation through a Web site

NetTracker can record the entire path of each visitor through the Web site without imposing any practical limits on the length of each path. NetTracker's series of Path summaries can either aggregate common trends across visitor segments or display the entire individual paths of visitors who are of interest. Furthermore, using NetTracker's option to declare any of a Web site's pages as dynamic pages, NetTracker can be prompted to include the query string in the path analysis of those dynamic pages. NetTracker's URL Search & Replace functionality allows users to clean query strings of obstructing information such as session identifiers. Finally, NetTracker's Data Conduits allow users to translate query-string codes such as "ContentID=1234" into meaningful page titles such as in the example below. Combining all of these capabilities, users can run many types of NetTracker Path summaries to analyze behavior, such as visits starting on a particular page, continuing through any particular destination page, or spanning between any two pages.
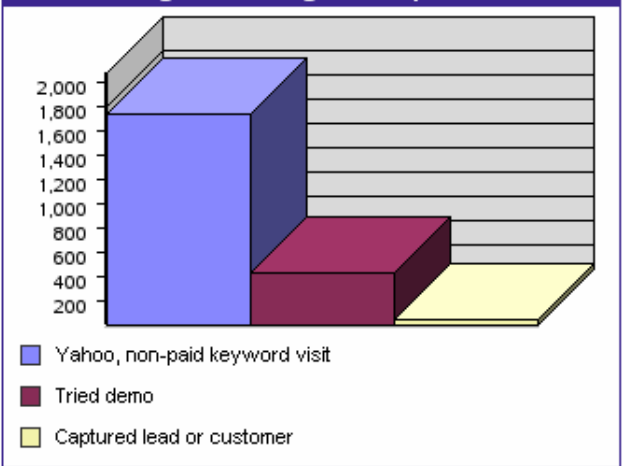
	Path	▲ Last Visit ▼	▲ Visits ▼
1.	/ View dynamic content / ContentID= Product manual for XGC 2005 / View dynamic content / ContentID= Repair guide for XGC 2005 / FAQ / QuestionID= Where can I get help / Contact us / Technical Support	Oct. 19, 2003 at 6:54 p.m.	982 (19.3%)
2.	/ View dynamic content / ContentID= Product manual for XGC 2005 / View dynamic content / ContentID= Price list / Contact us / Sales	Oct. 19, 2003 at 12:09 a.m.	573 (11.3%)

Investigating visitor navigation through a Web site

Using NetTracker's unsurpassed flexibility, you can investigate -- in countless ways -- the navigation patterns of specific visitor segments which are of interest to you. For example:

- You can filter a NetTracker Path Summary to investigate the behavior of specific segments of visitors, such as those coming to the Web site after clicking a paid listing on Google, searching for color copiers, or entering the Web site on a specific page, etc.

- From any NetTracker summary, a simple drill-down will reveal the entire clickstream of a selected visitor, giving you a sample to examine.

- With Scenario Reports such as the example on the right, you can track higher level, business-event paths.

Visitors' navigation through an acquisition scenario

(bar chart with values 200 to 2,000)

- Yahoo, non-paid keyword visit
- Tried demo
- Captured lead or customer

Action items

- Identify common paths that require more than five clicks and consider providing shortcuts.
- Redesign pages that are common exit points or frequently cause back-tracking.

Further reading

- Refer to the various sections, Creating a Custom Report: Creating a Path Summary in the NetTracker User's Guide.

Top clickthroughs to Web sites in our affiliate network

All others
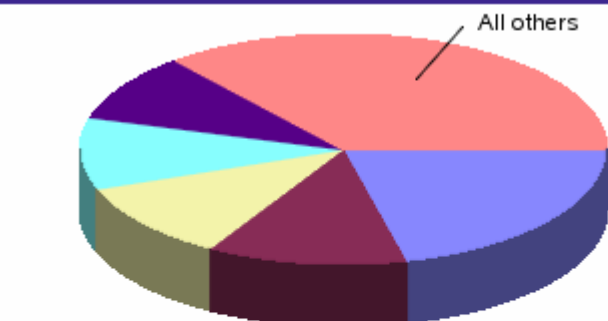
- http://www.our_affiliate_partner_DEF.com/
- http://www.partner_GHI.com
- http://www.affiliate_partner_ABC.com
- http://www.affiliate_network_XYZ.com
- http://www.affiliate_company_STU.com

Business goals

To determine the most effective location for a hyperlink or banner ad on a Web site page to maximize clickthroughs.

Background information and common terminology

A hyperlink can be in the form of a textual **link** embedded in the copy of the Web page, can be part of the Web page's menu, or can be in the form of a **banner ad** placed on the site. Often, Web pages contain more than one hyperlink leading to the same destination page, for example when one link is located within the menu and another in the copy. Hyperlinks can take the visitor to pages within the Web site, or can refer them away to other Web sites. Placement analysis is sometimes also called **quadrant analysis**, even if the area of a Web pages is not necessarily easily divided into exactly four quadrants.

Most common challenges

- When there are multiple hyperlinks from a page, each of which lead a visitor to the same destination page, raw clickstream analysis cannot reveal which of these hyperlinks a visitor has clicked.
- When a hyperlink refers a visitor away from a Web site, the following page view cannot be tracked and therefore there is no raw data to reveal which hyperlink was clicked.

Required information sources

Additional information to reveal that a specific link was clicked:

- One method is to redirect hyperlinks through a redirection utility, such as the one available with NetTracker. For example, instead of linking a banner ad directly to /Promotion.html, the hyperlink can be configured via NetTracker's redirection program, "ntadtrack", as follows:
  "/cgi_bin/ntadtrack.cgi?/Promotion,html?placement=lower+right+corner"
- Another method is to add a NetTracker JavaScript event tag to each hyperlink, which will create a specific log record when the link is clicked.

Campaigns

PPC

Organic Search

Visitor Attraction

Local Search

Content Relevancy

Navigation

Visitor Conversion

Placement

Individual Clickstreams

Recency

Cross sell

Repeat Business

NET TRACKER®

Sidebar labels:
Campaigns | PPC | Organic Search | Local Search | Content Relevancy | Navigation | Placement | Individual Clickstreams | Recency | Cross sell

Visitor Attraction | Visitor Conversion | Repeat Business

Solutions for measuring link and banner clickthroughs

NetTracker provides multiple mechanisms for marking hyperlinks in order to measure the clickthroughs for each. One method is to make use of the redirection programs supplied with NetTracker, i.e. "ntadtrack" (for banner ads) and "ntlinktrack" (for links). For example, ntadtrack is simply passed the destination page in the query string, as shown in the example on the front side of this card. When called in this manner, the program redirects the Web browser to the specified destination page. This call to "ntadtrack" is recorded in the Web server log files, similar to any other page request, and can thus be traced in NetTracker. NetTracker will exclude the call to the redirection program itself from its count of page views in order to keep the number of page views that it reports accurate. Once hyperlinks have been redirected in this manner, they can be configured in NetTracker as Links or Banner Ads. The Banner Ad Summary will display the number of impressions for the banner graphic as well as the clickthroughs to calculate a clickthrough rate, as in the example below.

	▲ Banner Ad ▼	▲ Last Clickthrough ▼	▲ Impressions ▼	▲ Clickthroughs ▼	▲ Clickthrough Rate ▼
1.	Printable discount coupon, link placed in header	Dec. 31, 2003 at 10:55 a.m.	2,237 (50.0%)	243 (56.4%)	10.9%
2.	Membership promotion, link placed in footer	Dec. 31, 2003 at 10:55 a.m.	2,237 (50.0%)	188 (43.6%)	8.4%

Investigating link and banner placement

The majority of investigative analysis for link placement occurs by experimenting with various link locations and banner ad creatives. In addition, however, you can cross-filter NetTracker's Banner Ad and Link Summaries with various criteria, in an ad hoc fashion, to investigate link effectiveness for various visitor segments. The example on the right shows the Banner Ad Summary, filtered for visitors who

- Visited during the morning hours
- Were referred from Yahoo
- Searched for a specific keyword on Yahoo's search engine

Banner clickthroughs, for visitors referred from Yahoo before 9am, having searched for color copiers

Legend:
■ Membership promotion
■ Printable discount coupon
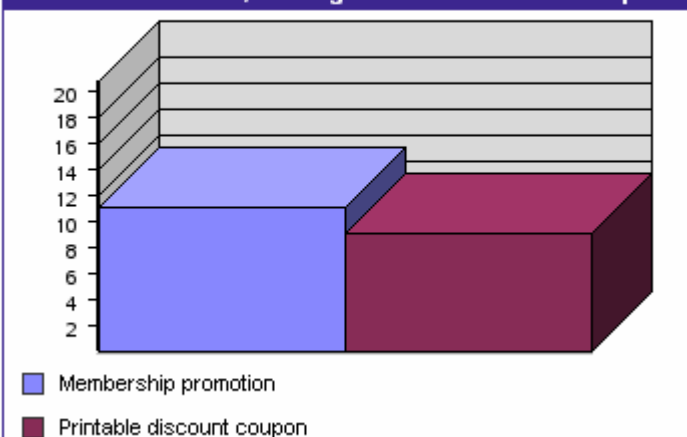
Action items

- Experiment with link placement, measure continuously and place links in the most effective quadrants.
- Cross-filter reports for specific visitor segments, to fine tune links further.

Further reading

- Refer to the sections, Analyzing Content: Analyzing Links, and Analyzing Banners Ads, in the NetTracker User's Guide.

Business goals

Generally speaking, individual-visitor clickstream analysis allows you to understand common Web site behavior by studying specific sample visitors.

However, in the context of business sales cycles, the purpose of individual visitor clickstream analysis is to gain insight into a prospective business customer's intent by observing the customer's behavior on the Web site. Using this insight, users can aim to shorten the average length of the sales cycle, and to increase the closure rate by putting forth more timely and targeted proposals.

Background information and common terminology

Business to business (**B:B**) sales cycles typically take multiple weeks or longer to complete. Typically, sales executives aid prospective customers through the sales cycle. Yet, the Web site is another channel through which individual contacts, at a prospect or customer account, self-evaluate offerings in parallel with, or in advance of, contacting a sales executive. Many companies successfully shorten their sales cycles, and improve their closure rates, by providing their sales executives with insight into their prospects' behavior on the Web site. The information is used in combination with the contacts' information stored in the **contact management** or **sales force automation** (**SFA**) system (e.g. SalesLogix from Best Software). Such additional insight enables the sales executive to better understand a prospect's interests, and put forth a more targeted proposal. In the case of existing customer accounts, sales executives can detect cross-sales opportunities by observing contacts browsing additional product offerings for which the account may not have shown a previous interest.

Most common challenges

- To relate a Web site visitor to a (prospective) customer account and contact, in the contact management system, solely based on online visitor identification information available from the Web site traffic data, e.g. cookies.
- To import customer contact information into Web site traffic reports so that they become meaningful to sales executives.
- To break down barriers between the Web site traffic analysis system and the sales force automation system.
- To retrieve reports about individual visitors.

Required information sources

A persistent cookie or Web site user name by which online visitors can be identified in their return visits is required. The cookie or user name is essential in mapping the visitor's online behavior traced in the Web site traffic system to the visitors' real life contact information stored in the SFA system. This is possible only if the visitor identified him or herself online by filling out an online form, entering contact information. The form data is typically entered into the database of the SFA system. The visitor's cookie or login name must also be included.

Visitor Attraction — Campaigns — PPC — Organic Search
Local Search
Visitor Conversion — Content Relevancy — Navigation — Placement
Individual Clickstreams
Repeat Business — Recency — Cross sell

Campaigns

PPC

Organic Search

Local Search

Content Relevancy

Navigation

Placement

Individual Clickstreams

Recency

Cross sell

Visitor Attraction

Visitor Conversion

Repeat Business

Solutions for individual visitor clickstream analysis

NetTracker includes an optional Web server plug-in which can set persistent cookies that uniquely identify visitors, should such cookies or logins not already be enabled for a Web site. If a Web site's online forms are then crafted such that they capture visitors' form entries as well as the active cookie or login name during that online session into a database, e.g. Microsoft Access, NetTracker's Data Conduits can locate and import that contact information into NetTracker reports. NetTracker will link the related data records using the cookie value or user name which is available both in NetTracker's database as well as in the aforementioned database. Reports, such as the example seen on the right, can be immediately activated.

Visitors who downloaded information on color copiers
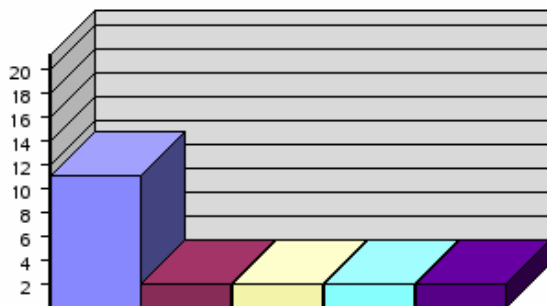
- F. Brouillette from Ridgefield, Tel.:903-591-6828, E-mail: FBrouillette@prodigy.com
- C. Whipple from Knoxville, Tel. 818-551-9014, E-mail: CWhipple@aol.com
- S. Matz from Maspeth, Tel. 213-291-9734, E-mail: SMatz@sane.com

Investigating individual contacts' clickstreams from SFA solutions

NetTracker SMB and NetTracker eBusiness both store Web site traffic data in an open database residing, for example, on Microsoft SQL Server. The data store is fully documented and published. For this reason, many companies are enhancing their SFA systems with data extracted and imported from the NetTracker database, similar to the sample screenshot displayed on the front side of this card. The SFA system, such as SalesLogix, is extended with additional text fields that can store a contact's online sessions, including significant online business events. A nightly batch process updates these fields with the latest information from NetTracker. Hyperlinked information in the SFA system can enable a sales executive to simply click a contact's online visit in the SFA system in order to pop up NetTracker's user interface in a Web browser window and recreate the selected visit inside NetTracker, page by page, minute by minute.

Filters Applied: Visit Began: Friday, Sept. 5, 2003 at 7:36 p.m.
Host: tide08.microsoft.com
Cookie: 68.170.94.54-1063687737205790
Browser: Microsoft Internet Explorer 6.x
Platform: Windows 2000

▲ Time ▼	▲ Page ▼
1.	7:36 p.m.	/ Sign up / Options
2.	7:37 p.m.	/ Sign up / Product copy paper 500 pages
3.	7:42 p.m.	/ Sign up / Options
4.	7:43 p.m.	/ Action / Sign up / Thank you

Action items

- Set up regular e-mail distribution from NetTracker to your sales executives, with links to contacts' recent visits.
- Investigate individual customers' online behavior for actionable insight.

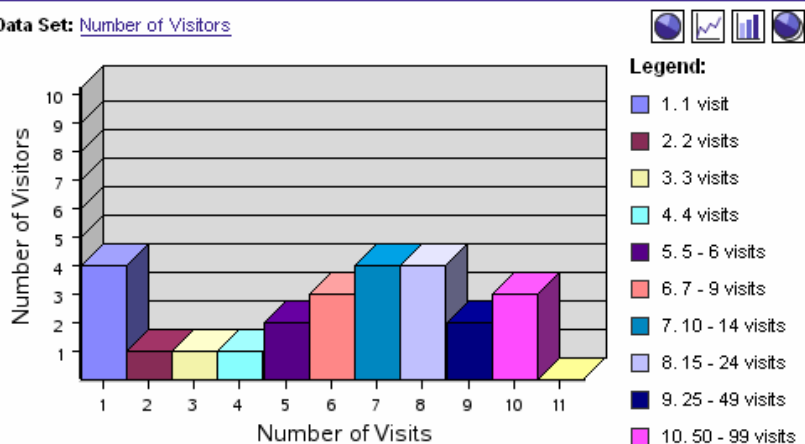## Further reading

- Further inspiration online at http://www.sane.com/saleslogix .
- Download NetTracker's data model documentation from http://www.sane.com .

Download a free trial of NetTracker at www.sane.com or order your copy at 1-800-407-3570.

Increase repeat business with repeat-visit and recency analysis - Page 1/2

Filters Applied: Visitor Profile: Visits with purchases from the online store

Visitor Retention Breakdown

Data Set: Number of Visitors

Legend:
- 1. 1 visit
- 2. 2 visits
- 3. 3 visits
- 4. 4 visits
- 5. 5 - 6 visits
- 6. 7 - 9 visits
- 7. 10 - 14 visits
- 8. 15 - 24 visits
- 9. 25 - 49 visits
- 10. 50 - 99 visits

Business goals

To increase profits by retaining current customers and gaining repeat business, since the acquisition of new customers is known to be expensive.

This of course does not negate the goal of acquiring new customers, necessary as well to avoid the risk of going out of business should existing customers be lured away by a competitor.

Background information and common terminology

The concept of **first time visitors** versus **repeat visitors** is easily understood, but actually quite difficult to determine technically for a Web site. At a minimum, a **unique and persistent cookie** is required to recognize return visitors. With that, a Web traffic analysis system can lookup a visitor's identification in the existing records in its database to determine whether a visitor has visited before. Intelligent Web site analytics systems like NetTracker will detect that a first time visitor's first page request will not yet contain a cookie, because the cookie is only issued by the Web server during the processing of that first request. Nonetheless, there remains a significant margin of error due to the fact that visitors may delete cookies repeatedly, visitors may use more than one computer to visit a Web site, or cookies may expire. If the Web site is a registration Web site, that margin of error can be reduced using a user name for visitor identification. Even user names, however, may change over time.

The term **recency** refers to the amount of time that has passed since a visitor's last visit or last purchase. Recency is known among database marketing experts to be the strongest indicator that a visitor is prone to become a (repeat) customer. **Frequency** refers to the number of times that a visitor has visited the Web site (or purchased) in a given time frame. Frequency is an indicator of loyalty and propensity to purchase, but not as strong an indicator as recency. Finally, **stickiness** is a compound measure that combines the average recency, frequency, and reach of a Web site.

Most common challenges

- Visitor identification, whether through cookies or user names, is not an exact science due to aforementioned challenges.
- Even registered-users only Web sites have a public portion which requires no registration. A visitor may only obtain a cookie or login during part of their visit. This makes correct sessionization and visitor recognition impossible for less sophisticated Web site analytics systems.

Required information sources

- A persistent cookie or Web site login name by which online visitors can be identified when they return to the Web site.
- For recency analysis, the date of the last visit or last purchase of each visitor.
- For frequency analysis, a record of each visit from each visitor along with the visit data, so that frequency can be computed for arbitrary time periods.

Visitor Attraction — Campaigns — PPC — Organic Search
Local Search
Visitor Conversion — Content Relevancy — Navigation — Placement
Individual Clickstreams
Repeat Business — Return Visits & Recency — Cross sell

Campaigns
PPC
Organic Search
Local Search
Content Relevancy
Navigation
Placement
Individual Clickstreams
Repeat Visits & Recency
Cross sell

**Visitor Attraction**
Visitor Conversion
Repeat Business

Solutions for monitoring repeat visits or purchases

NetTracker includes an optional Web server plug-in which can set persistent cookies that uniquely identify visitors, should such cookies or user names not already be enabled for a Web site. NetTracker will make the best possible assessment based on the data available to determine whether a visitor has visited before or is visiting for the first time. With this information you can, for example, monitor the trend of visits to the Web site similar to the example on the right.

In addition, NetTracker's database contains the visit history for every visitor. From that, the Visitor Retention Summary can calculate the frequency of visits for any time period. As can be seen in the image on the front side of this card, you can apply filters for specific visit criteria, for example to calculate the frequency of visits with purchases.
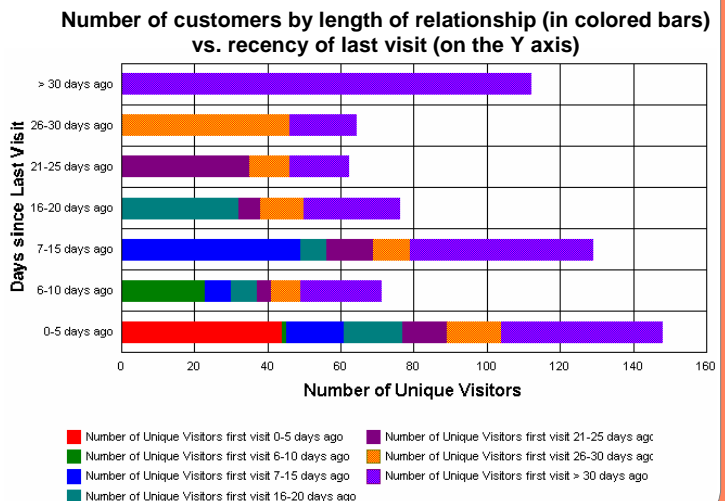
Repeat vs. first time visitors

- New visitor visit
- Repeat visitor visit
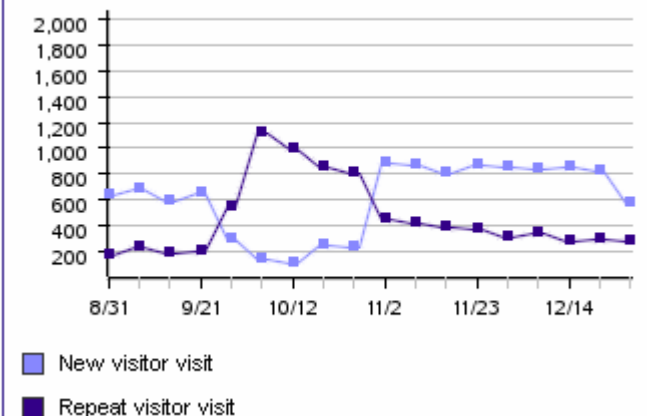
Investigating recency and frequency

In order to determine the most recent visitors or purchasers, you can filter NetTracker's Visitor, Cookie or User Summaries for any time frame, such as the last 3 days. You can export the list in order to target campaigns to this promising segment of visitors, assuming that they have previously provided their contact information, and that you store the contact information along with the visitor's persistent cookie or user name.

Using NetTracker SMB or NetTracker eBusiness with a business intelligence reporting tool, for creating more advanced reports, you can gain even more insight. The example on the right analyzes a site's stickiness, segmenting visitors by the lengths of their relationship with you (colored bars) vs. the recency of their last visit, i.e. retention.

Number of customers by length of relationship (in colored bars) vs. recency of last visit (on the Y axis)

Days since Last Visit:
- > 30 days ago
- 26-30 days ago
- 21-25 days ago
- 16-20 days ago
- 7-15 days ago
- 6-10 days ago
- 0-5 days ago

Number of Unique Visitors

- Number of Unique Visitors first visit 0-5 days ago
- Number of Unique Visitors first visit 6-10 days ago
- Number of Unique Visitors first visit 7-15 days ago
- Number of Unique Visitors first visit 16-20 days ago
- Number of Unique Visitors first visit 21-25 days ago
- Number of Unique Visitors first visit 26-30 days ago
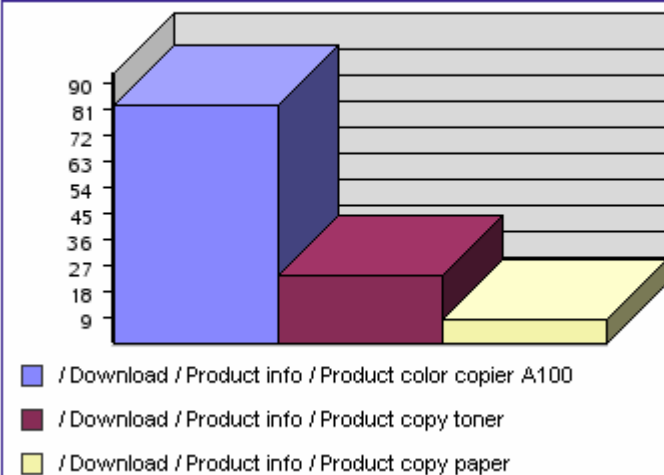- Number of Unique Visitors first visit > 30 days ago

Action items

- Measure repeat visits continuously, as you work to build lasting relationships.
- Focus repeat business campaigns on the most recent visitors and customers.

Further reading

- Further inspiration for using NetTracker in combination with a business intelligence reporting tool, online at http://www.sane.com .

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Web analytics recipe cards

Customers interested in color copier A100 were also interested in following other products

90	
81	
72	
63	
54	
45	
36	
27	
18	
9	

- / Download / Product info / Product color copier A100
- / Download / Product info / Product copy toner
- / Download / Product info / Product copy paper

Business goals

To gain additional revenues and maximize the lifetime value of customers.

To identify possible segments with a higher lifetime value, such as customers of multiple product lines who often tend to be more loyal customers, less prone to attrition.

Background information and common terminology

Cross-selling refers to selling additional products to existing customers. **Up-selling** refers specifically to selling higher-end products to existing customers. Two steps are required before such a sales or marketing effort can be brought underway. First, you want to identify the products that are good candidates for cross and up-selling. For vendors with few product offerings this may be easy. For retailers and manufacturers with large number of products, **product affinity analysis** (or **market-basket analysis**) measures customers' likelihood to be interested in one product if they also showed interest in (or have purchased) another. The second pre-requisite is to identify customers who are good candidates for cross and up-sell efforts. Such target customers can be derived from the records about the products these customers already own and have not yet purchased. However, lists of target customers can be further refined by observing their online behavior, which may reveal them browsing potential cross or up-sell products on your Web site.

Most common challenges

- Customers' purchasing history and their recent online activity need to be integrated for cross-sell analysis. However, the former is typically stored in a CRM or ERP system whereas the latter is viewed from the Web site analytics systems. And, with most systems, the Web site analytics database is proprietary, and data is locked away out of reach for integration purposes.
- Cross-sell analytics, sales analytics, and campaign management exceed the functionality for which Web site analytics systems are designed.

Required information sources

- A persistent cookie or Web site user name by which online visitors can be identified and related to their records in the CRM or ERP system.
- Customers' purchase history stored in a data warehouse for analysis through a business intelligence reporting system.
- Visitors' Web site traffic behavior stored in an open, documented data warehouse, for integrated analysis with sales data using a business intelligence reporting solution, or similar.

Visitor Attraction

- Campaigns
- PPC
- Organic Search
- Local Search

Visitor Conversion

- Content Relevancy
- Navigation
- Placement
- Individual Clickstreams

Repeat Business

- Return Visits & Recency
- Cross sell

NET TRACKER®

Solutions for monitoring cross-sell opportunities in NetTracker

NetTracker's Visitor Profiles are a mechanism by which you can put an ear mark on Web site visits during which certain business events were completed, e.g. visits in which a particular product was viewed, or a specific brochure was downloaded. Once NetTracker has profiled visits in this manner, you can use these Visitor Profiles to create NetTracker reports that measure any other behavior that also took place in the same visits in which the particular business event was completed. For example, the chart on the front of this card measures what other products visitors downloaded information for, during the 82 visits in which visitors downloaded information on the A100 color copier. From the report, it can be derived that copier toner has the highest propensity to be of interest in conjunction with color copiers. This type of analysis can help identify products that are good candidates for cross-selling.

Investigating cross-sell opportunities with a BI solution

You can take cross-sell analysis a big step further with the help of NetTracker SMB and NetTracker eBusiness which store all Web site traffic data in an open, documented data warehouse, such as MySQL, Microsoft SQL Server, Oracle, DB2 or Teradata. This enables you to combine customers' online behavior data (warehoused in NetTracker's database) with customers' prior purchase history (warehoused in a CRM or ERP system) within a business intelligence (BI) solution such as Cognos, Business Objects or MicroStrategy. You can generate reports like the following example, that shows what other products customers who had previously purchased a product within the Hardware product group, also browsed online.

| Study product owned by customers: | | Hardware | | |
Metrics	Number of Visits	Cross-sales	ROI	ROI per Visit
The same customers also browsed online:				
Atlantic Monthly	122	$10,045.26	$4,358.47	$35.73
Two Against Nature	82	$10,296.18	$5,129.29	$62.55
The Remains Of Tom Lehrer	78	$13,621.81	$9,412.32	$120.67
Newsweek	76	$4,165.70	$1,415.06	$18.62

Finally, using both online and purchase history criteria you can extract a target customer list from your BI solution, to conduct a promising cross-sales campaign.

Customer					
Benoit	Ward	P	Benoit@prodigy.com	F	(212)510-2052
Victoria	Jauregui	H	Victoria@prodigy.com	F	(415)857-8488
Constance	Imes	D	Constance@prodigy.com	M	(609)547-5890
Enzo	Kellaway	S	Enzo@prodigy.com	M	(619)298-7396

Action items

- Identify customers that are good candidates for cross-selling of products to.
- Target these customers in cross-sell campaigns.

Further reading

- Refer to section Analyzing Visitors or Users: Analyzing Visitor Profiles in the NetTracker User's Guide.
- For using NetTracker with BI solutions see http://www.sane.com.

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Download a free trial of NetTracker
at www.sane.com or order your copy
at 1-800-407-3570.

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